

HR-270 Evaluation of Urban Concrete Pavement Restoration (CPR) Procedures and Techniques

Abstract

The State of Iowa has several thousand miles of Portland cement concrete (PCC) paved roads and streets. The Secondary road system exceeds 5000 miles, and city streets include several million square yards. By a recent survey conducted by the Iowa Concrete Paving Association, over 60 cities in the state have streets that are over 40 years old that have not been resurfaced and have had a minimum amount of maintenance work done.

Maintenance techniques on PCC pavements in Iowa on city streets, state and county roads have included repair of blowups and overfilling of cracks and joints with cheap sealants. The latter has turned out to be of little value to the life of the pavement. The value of proper maintenance techniques has not been understood by those doing the work. Maintenance of PCC pavements has been at a minimal. Although the overall performance has been excellent, with a proper maintenance program, it's very probable that the life could be extended beyond 10 years with costs government could afford.

Within the past two years, the Federal Highway Administration's Demonstration Projects Division has implemented a plan for PCC pavement restoration. Although this program was originally intended for Concrete Pavement Restoration (CPR) for interstate-type routes, it appears that education by demonstration is important for maintenance in counties and cities in Iowa and throughout the United States.

The objective was to demonstrate various CPR techniques, to develop specifications, evaluate various materials used, and to develop visual aids to educate those responsible for maintenance of PCC paved roads, streets and airports.